WHAT IS CLAIMED IS:

1. A method, comprising:

receiving at a processing element a request to transmit a packet associated with a packet identifier;

determining a number of transmit buffers to be associated with the packet; and

arranging for the packet to be transmitted through a port without storing the packet identifier in a local transmit queue if the number of transmit buffers does not exceed a pre-determined threshold.

2. The method of claim 1, further comprising:

arranging for the packet identifier to be stored in the local transmit queue for that port if the number of transmit buffers exceeds the pre-determined threshold.

3. The method of claim 2, wherein the packet identifier is stored in an external memory unit when the local transmit queue for that port is full.

4. The method of claim 1, further comprising:

evaluating a status of the port associated with the packet, wherein it is arranged for the packet to be transmitted without storing the packet identifier in the local transmit queue only if (i) the number of transmit buffers does not exceed the pre-determined threshold and (ii) the port is available to transmit the packet.

5. The method of claim 4, wherein the evaluation is based on a flow-control condition of that port.

6. The method of claim 1, further comprising:

determining if the local transmit queue is empty, wherein it is arranged for the packet to be transmitted without storing the packet identifier in the local transmit queue only if (i) the number of transmit buffers does not exceed the pre-determined threshold and (ii) the local transmit queue is empty.

7. The method of claim 1, wherein the request to transmit the packet is received from a queue manager.

8. The method of claim 1, wherein said receiving, determining, and arranging are executed by a processing thread in a multi-threaded, reduced instruction set computer microengine.

9. The method of claim 8, wherein the microengine is associated with at least one of: (i) a network device, (ii) a network processor, and (iii) an asynchronous transfer mode network device.

10. An article, comprising:

a storage medium having stored thereon instructions that when executed by a machine result in the following:

receiving at a processing element a request to transmit a packet associated with a packet identifier;

determining a number of transmit buffers to be associated with the packet; and

arranging for the packet to be transmitted through a port without storing the packet identifier in a local transmit queue if the number of transmit buffers does not exceed a pre-determined threshold.

11. The article of claim 10, wherein execution of the instructions further results in:

arranging for the packet identifier to be stored in the local transmit queue for that port if the number of transmit buffers exceeds the pre-determined threshold.

12. The article of claim 10, wherein execution of the instructions further results in:

evaluating a status of the port associated with the packet, wherein it is arranged for the packet to be transmitted without storing the packet identifier in the local transmit queue only if (i) the number of transmit buffers does not exceed the pre-determined threshold and (ii) the port is available to transmit the packet.

13. An apparatus, comprising:

an input path to receive a request to transmit a packet associated with a packet identifier;

a local memory portion; and

a processing portion adapted to arrange for the packet to be transmitted through a port without storing the packet identifier in the local memory portion if a number of transmit buffers to be associated with the packet does not exceed a pre-determined threshold.

14. The apparatus of claim 13, wherein the processing portion is further adapted to store the packet identifier in the local memory portion if the number of transmit buffers exceeds the pre-determined threshold.

15. The apparatus of claim 13, wherein the processing portion is to arrange for the packet to be transmitted through the port without storing the packet identifier in the local memory portion on if (i) the number of transmit buffers does not exceed the pre-determined threshold and (ii) the port is available to transmit the packet.

16. A method, comprising:

receiving at first thread in a first processing element a request to transmit a packet;

determining a size of the packet; and

arranging for the first thread to provide requests to transmit multiple sub-packets if the size of the packet does not exceed a pre-determined threshold, wherein the requests are provided to a second processing element.

17. The method of claim 16, further comprising arranging for multiple threads to provide requests to transmit sub-packets if the size of the packet exceeds the pre-determined threshold.

18. The method of claim 17, wherein the requests are provided via a dedicated path that provides information from the first processing element to the second processing element.

19. An article, comprising:

a storage medium having stored thereon instructions that when executed by a machine result in the following:

receiving at first thread in a first processing element a request to transmit a packet;

determining a size of the packet; and

arranging for the first thread to provide requests to transmit multiple sub-packets if the size of the packet does not exceed a pre-determined threshold, wherein the requests are provided to a second processing element.

20. The article of claim 19, wherein execution of the instructions further results in:

arranging for multiple threads to provide requests to transmit sub-packets if the size of the packet exceeds the pre-determined threshold.

21. A method, comprising:

receiving at a second processing element requests to transmit multiple sub-packets, the requests being received from a first thread executing at a first processing element; and

arranging for the sub-packets to be transmitted through a port using a transmit buffer for each sub-packet.

22. The method of claim 21, wherein the requests are received via a dedicated path that provides information from the first processing element to the second processing element.

23. An article, comprising:

a storage medium having stored thereon instructions that when executed by a machine result in the following:

receiving at a second processing element requests to transmit multiple sub-packets, the requests being received from a first thread executing at a first processing element; and

arranging for the sub-packets to be transmitted through a port using a transmit buffer for each sub-packet.

24. The article of claim 23, wherein the requests are received via a dedicated path that provides information from the first processing element to the second processing element.

25. A system, comprising:

a backplane;

a first line card connected to the backplane; and

a second line card connected to the backplane, the second line card including a processing element having:

an input path to receive a request to transmit a packet associated with a packet identifier,

a local memory portion, and

a processing portion adapted to arrange for the packet to be transmitted through a port without storing the packet identifier in the local memory portion if a number of transmit buffers to be associated with the packet does not exceed a pre-determined threshold.

26. The system of claim 25, wherein the processing portion is further adapted to store the packet identifier in the local memory portion if the number of transmit buffers exceeds the pre-determined threshold.

27. The system of claim 26, wherein the processing portion is to arrange for the packet to be transmitted through the port without storing the packet identifier in the local memory portion on if (i) the number of transmit buffers does not exceed the pre-determined threshold and (ii) the port is available to transmit the packet.